

We claim:

1. A magnetic write head, comprising:

(a) a bottom yoke having a pedestal with a first pole tip that is formed along an air bearing surface (ABS);

(b) a write gap layer formed above said pedestal; and

(c) a planar top yoke connected to said bottom yoke through a back gap region, said planar top yoke has a second pole tip region and a front section that is narrower than a back section wherein said front section has front and back ends and a first thickness wherein said front end is attached to a back end of said second pole tip region formed above said write gap layer and wherein said second pole tip region has a second thickness less than said first thickness, a width, a length, and a front end or second pole tip formed along the ABS.

2. The magnetic write head of claim 1 wherein the length of said second pole tip region is the distance from the ABS to the front end of said front section which is about 0.2 to 2 microns.

3. The magnetic write head of claim 1 wherein the distance from the ABS to the back end of said front section is about 1 to 3 microns.

4. The magnetic write head of claim 1 wherein the first thickness is about 0.8 to 3 microns and the second thickness is about 0.4 to 1.2 microns.

5. The magnetic write head of claim 1 wherein the ratio of said second thickness to said first thickness is from about 0.3 to 0.7.

6. The magnetic write head of claim 1 wherein the width of said second pole tip region is about 0.1 to 0.25 microns.

7. The magnetic write head of claim 1 wherein the top yoke, second pole tip region, and bottom yoke are comprised of NiFe, CoNiFe, FeCo, or FeCoN.

8. The magnetic write head of claim 1 wherein said write gap layer and said first pole tip have a width that is equal to the width of said second pole tip region.

9. The magnetic write head of claim 1 further comprised of an overcoat insulating layer which is formed on said planar top yoke, a dielectric layer formed between said planar top yoke and said bottom yoke, and a coil layer formed within said dielectric layer.

10. The magnetic write head of claim 1 in which the bottom yoke also serves as a top layer in a read head in a merged read/write head structure.

11. The magnetic write head of claim 1 wherein the distance from the ABS to the back gap region is about 5 to 25 microns.

12. The magnetic write head of claim 1 wherein said planar top yoke has a bottom that is coplanar with said write gap layer.

13. The magnetic write head of claim 1 wherein said write gap layer extends a distance of about 0.4 to 1.2 microns from said ABS toward said back gap region.

14. A magnetic write head, comprising:

(a) a bottom yoke having a pedestal with a first pole tip that is formed along an air bearing surface (ABS);

(b) a write gap layer formed above said pedestal; and

(c) a planar top yoke connected to said bottom yoke through a back gap region, said planar top yoke is comprised of:

(1) a back section that has a first thickness and a front end attached to the back end of a front section;

(2) a front section comprised of a first segment having a first thickness, a length, front and back ends wherein the back end is attached to the front end of the back section, and a second segment having a second thickness less than said first thickness, a length, and front and back ends wherein the back end is adjacent to the front end of said first segment and the front end is adjacent to the back end of a second pole tip region; and

(3) a second pole tip region having a third thickness less than said second thickness, a width, a length, and front and back ends wherein the front end is a second pole tip formed along said ABS.

15. The magnetic write head of claim **14** wherein the combined lengths of said second segment and second pole tip region is the distance from the ABS to the front end of the first segment which is about 0.4 to 3 microns.

16. The magnetic write head of claim **14** wherein the length of the second pole tip region is the distance from the ABS to the front end of the second segment which is about 0.2 to 1.5 microns.

17. The magnetic write head of claim **14** wherein the first thickness is about 0.8 to 4 microns, the second thickness is about 0.6 to 2.6 microns, and the third thickness is about 0.4 to 1.2 microns.

18. The magnetic write head of claim **14** wherein the ratio of said third thickness to said first thickness is from about 0.2 to 0.6.

19. The magnetic write head of claim **14** wherein said width of the second pole tip region is about 0.1 to 0.25 microns.

20. The magnetic write head of claim **14** wherein said write gap layer extends a distance of about 0.4 to 1.2 microns from the ABS toward the back gap region.

21. The magnetic write head of claim **14** wherein the top yoke, second pole tip region, and bottom yoke are comprised of NiFe, CoNiFe, FeCo, or FeCoN.

22. The magnetic write head of claim **14** wherein the width of said second pole tip region is the same as the width of the write gap layer, first pole tip, and pedestal.

23. The magnetic write head of claim **14** further comprised of an overcoat insulating layer which is formed on said planar top yoke, a dielectric layer formed between said planar top yoke and said bottom yoke, and a coil layer formed within said dielectric layer.

24. The magnetic write head of claim **14** in which the bottom yoke also serves as a top layer in a read head in a merged read/write head structure.

25. The magnetic write head of claim **14** wherein the distance from the ABS to the back gap region is about 5 to 25 microns.

26. The magnetic write head of claim **14** wherein said planar top yoke has a bottom that is coplanar with said write gap layer.